

## **THE CLAIMS**

For the convenience of the Examiner, all pending claims of the present Application are shown below whether or not an amendment has been made.

1.     **(Original)** A method of identifying problems in applications, comprising:  
          monitoring at a kernel level system resource usage of one or more running applications without modifying run-time environments of the running applications; and  
          identifying from the monitored system usage, an application whose system usage pattern satisfies a predetermined criteria associated with one or more problems.
2.     **(Original)** The method of claim 1, wherein the system resource usage comprises one or more processes that the one or more running applications have spawned.
3.     **(Original)** The method of claim 1, wherein the system resource usage comprises central processing unit usage of the one or more running applications.
4.     **(Original)** The method of claim 1, wherein the system resource usage comprises memory usage of the one or more running applications.
5.     **(Original)** The method of claim 1, further comprising:  
          producing an output comprising at least the system resource usage associated with each of the one or more running applications.
6.     **(Original)** The method of claim 5, wherein the identifying comprises:  
          identifying from the output an application whose system resource usage pattern satisfies a predetermined criteria associated with one or more problems.
7.     **(Original)** The method of claim 6, wherein the predetermined criteria is an increase in amount of the system resource usage from a first period to a second period.
8.     **(Original)** The method of claim 6, wherein the predetermined criteria is a continuous increase in amount of the system resource usage from a first period to a second period.

9. **(Original)** The method of claim 1, wherein the monitoring comprises:  
using an available kernel level tool to obtain data associated with the system resource  
usage.

10. **(Original)** The method of claim 1, wherein the monitoring comprises:  
using an available kernel level tool to obtain data that includes the system resource  
usage; and  
filtering the data to obtain a selected system resource usage.

11. **(Original)** The method of claim 10, wherein the identifying comprises at  
least:  
using the filtered data to identify an application whose system resource usage pattern  
satisfies a predetermined criteria associated with one or more problems.

**12. (Currently Amended)** A method of identifying memory problems in applications, comprising:

monitoring at a kernel level memory usage of a running application without modifying a run-time environment of the running application; and

producing an output comprising at least the memory ~~usage~~-usage; and

identifying from the monitored memory usage, an application whose system usage pattern satisfies a predetermined criteria associated with one or more problems.

**13. (Original)** The method of claim 12, further comprising:

analyzing the output to identify a memory problem.

**14. (Original)** A method of identifying memory problems in applications, comprising:

monitoring at a kernel level memory usage of one or more running applications without modifying run-time environments of the running applications;

producing an output comprising at least the memory usage of one or more running applications; and

identifying from the output, an application whose memory usage pattern satisfies a predetermined criteria associated with one or more memory problems.

**15. (Original)** A method of identifying memory problems in applications, comprising:

monitoring at a kernel level memory usage of one or more running applications without modifying run-time environments of the running applications; and

identifying from the monitored memory usage, an application whose memory usage pattern satisfies a predetermined criteria associated with one or more memory problems.

**16. (Original)** The method of claim 15, wherein the monitored memory usage comprises at least a stack memory, data memory, and text memory.

17. **(Original)** A method of identifying memory problems in applications, comprising:

collecting system resource usage at a kernel level of one or more running applications without modifying run-time environments of the running applications; and

identifying from the collected system resource usage, an application whose system resource usage pattern satisfies a predetermined criteria associated with one or more system resource usage problems.

**18. (Currently Amended)** A system for identifying problems in applications, comprising:

a data collection module operable to retrieve information about a running application at a kernel level; and

a data analysis module operable to determine from the retrieved information an abnormal system usage pattern in the ~~information~~ information; and identify from the abnormal system usage pattern, an application whose system usage pattern satisfies a predetermined criteria associated with one or more problems.

**19. (Original)** A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps of identifying problems in applications, comprising:

monitoring at a kernel level system resource usage of one or more running applications without modifying run-time environments of the running applications; and

identifying from the monitored system usage, an application whose system usage pattern satisfies a predetermined criteria associated with one or more problems.

**20. (Original)** The program storage device of claim 19, wherein the system resource usage is memory usage, CPU usage, or one or more spawned processes, or combinations thereof.